Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-110. (Canceled)

111. (Currently Amended) A method by which a client connected to a data repository over a lower speed network connection may provide higher speed access to a data item for application processing than is possible over the relatively low speed connection to the network, the method comprising:

determining a digital fingerprint of the data item;

testing for whether the data item is already stored in a repository by comparing the digital fingerprint of the data item to digital fingerprints of data items already in the repository;

only if the data item is not already stored in the repository, transferring the data item over the lower speed connection from the client to the repository;

assigning an expiration time to the data item, before which time both modification and deletion is are prohibited;

making a higher speed connection between an application server and the data repository;

executing an application on the application server to process the data item stored on the data repository; and

returning at least some of the processed data to the client across the lower speed connection.

112. (Currently Amended) The method of claim 111 in which the data repository comprises a plurality of storage sites and rules governing expiration and deletion are distributed to the among a plurality of storage sites as part of the process of storing data items.

113. (Currently Amended) The method of claim 111 in which the expiration time assigned to the data item depends upon an expiration times assigned by the client ~~programs~~.

114-163. (Cancelled)

164. (Currently Amended) The method of claim 111 wherein ~~the client deposits an entity version into the disk-based distributed data storage system and an expiration time is assigned to the entity version and~~ no action taken by the client can change the expiration time assigned to the ~~entity version~~ data item to an earlier time.

165. (New) The method of claim 111 wherein after the expiration time has passed deletion of the data item is allowed.

167. (New) The method of claim 111 in which the data repository is a disk-based data storage system.

168. (New) The method of claim 111 in which the application server is separate from and independent of the data repository, and is connected to it by the network.

169. (New) The method of claim 111 in which the digital fingerprint is a cryptographic hash of the content of the data item.

170. (New) The method of claim 111 in which the data item is encrypted using a key based on the content of the data item.

171. (New) The method of claim 111 in which the processed data is returned to the client via a Web browser.

172. (New) The method of claim 111 in which the client has a plurality of data items stored in the data repository and the client controls which of the plurality of data items the application server is allowed to access.

173. (New) The method of claim 172 in which the application server diagnoses a problem based on the plurality of data items.